

Date: Tuesday, 12/12/2006 7:39:04 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : BLADE  
 Job Number : 29868  
 Estimate Number : 10327  
 P.O. Number : N/A Part Number : D2741  
 This Issue : 12/12/2006 S.O. No. : N/A Drawing Number : D2741 REV C  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : MACHINED PARTS Drawing Revision : C  
 Previous Run : 28521 Material : N/A  
 Due Date : 1/10/2007 Qty: 30 Um: Each  
 Written By : KA 06/12/12  
 Checked & Approved By : KA 06/12/12  
 Comment : Est Rev: D 00.11.15 Removed P/O turning - in house  
 processEC  
 Est Rev: E 06-03-20 As Per Rev C  
 JLM  
 Est Rev: F 06.04.20 Added grinding after heat treating EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M4130NB0500X03000 4130 Bar 0.5 x 3.0"



Comment: Qty.: 1.2118 f(s)/Unit Total: 36.3542 f(s)

4130 BAR 0.5 x 3.0"

Material: 4130 steel bar 0.50" x 3.00"

Batch: M102544

Ep 06/12/15

(30)

2.0 BAND SAW BAND SAW



Comment: BAND SAW

Cut blanks 13.850" long +0.063" -0.000"

Ep 06/12/15

(30)

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine per folio FA108

J.L./J.F. 06/12/17

(30)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 12/12/2006 7:39:04 AM  
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Drawing Name: BLADE

Job Number: 29868

Part Number: D2741

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 06/12/17 (30)

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 06.12.17

6.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Deburr ✓

2-Bend per Dwg D2741

SB 06/12/17

J.F. 06/12/17

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

AS 06/12/20

(30)

8.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: 2759

Harden material as per Dwg D2741

Min. Ultimate Tensile Strength = 152 ksi (30-40 HRC)

Min. Yield Tensile Strength = 141 ksi

Test report or Certification required

C206112121

(30)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive and Inspect for transit damage

Ensure Test report or Certification attached

PC 7/1/16 (30)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07-01-19 (30)

11.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Grind off carbon deposits

YR 07/01/22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: ☒ Date: 07/01/29  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 12/12/2006 7:39:04 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE

Job Number: 29868

Part Number: D2741

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

POWDER COATING

POWDER COATING



M103141



(30x)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

m.h/yl

07/01/25

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

PC 7/01/26 (30)

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 57150

CP 07/01/26 (30)

PC 7/01/26

15.0

QC21

FINAL INSPECTION/W/O RELEASE



(30)

Comment: FINAL INSPECTION/W/O RELEASE

PC 07/01/29

Job Completion



u 07.01.29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

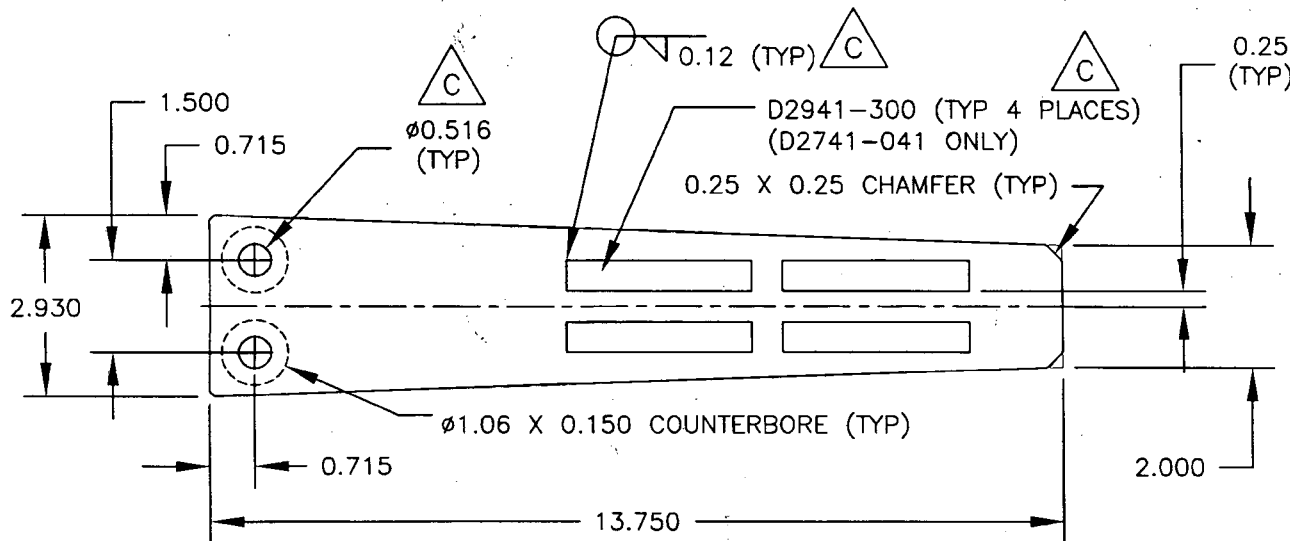
**NOTE:** Date & initial all entries



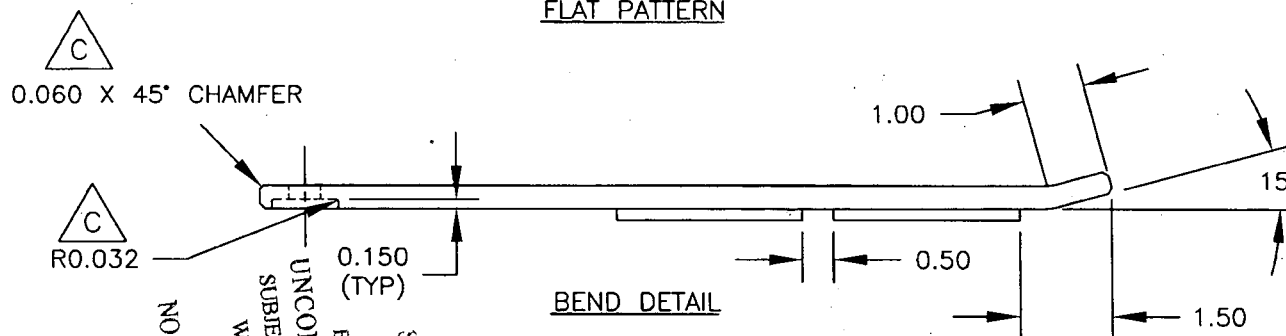
**DART**

**RELEASED**  
06 02 07 - 11

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
04	04	PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. C
04	04	D2741	SHEET 1 OF 1
DATE	TITLE	SCALE	
06.01.12	BLADE	1:3	
A	98.04.16	NEW ISSUE	
B	98.09.01	CHANGE C'SINK TO C'BORE	
C	06.01.12	LARGER HOLE, ADD RADIUS AND CHAMFER ADD -041/-043 OPTIONS	



FLAT PATTERN



BEND DETAIL

D2741 BLADE

- 1) MATERIAL: AISI 4130 STEEL 0.375 THICK  
MIN. ULTIMATE TENSILE STRENGTH = 152 ksi (34-40 HRC)  
MIN. YIELD TENSILE STRENGTH = 141 ksi
- 2) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.030 TO 0.060
- 6) TO MAKE D2741-041, WELD D2941-300 (4) AS SHOWN ABOVE.  
REMOVE POWDER COAT FROM SURFACE OF D2941-300
- 7) TO MAKE D2741-043, WELD 7560 HARDCOAT ROD INSTEAD OF D2941-300

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 29868





**VAC AERO**  
INTERNATIONAL INC.

**RELEASE NOTE**

GST No. : R105468102

OAK 82766-1



HEAD OFFICE  
1371 SPEERS ROAD, OAKVILLE, ONTARIO  
CANADA L6L 2X5  
TEL: (905) 827-4171 FAX: (905) 827-7489



2009 WYECROFT ROAD, UNIT B  
OAKVILLE, ONTARIO  
CANADA L6L 6J4  
TEL: (905) 827-7377 FAX: (905) 827-1380



QUEBEC DIVISION  
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC  
CANADA H4S 1C5  
TEL: (514) 334-4240 FAX: (514) 334-6269

01/12/2007

MM / DD / YYYY

PAGE : 1

BILL TO: 1DAR01  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

K6A 1K7

K6A 1K7

DATE SHIPPED	SHIP VIA	F.O.B.
01/12/2007		ORIGIN
CUSTOMER P/O No.	JOB No.	TERMS
P000002759		COD

PART No.	DESCRIPTION	UOM	QTY ORD	QTY SHPD	TEST RESULTS
D2741	B29868 BLADE	EA	30	30	
<p>Process Specifications: Procedure: 4161 HARDENED PER DWG. D2741 TO 152 KSI MINIMUM HARDNESS TESTED AS PER ASTM E-18: HRC 34-40 MATERIAL: 4130</p> <p>PS# 274736</p> <p><i>[Signature]</i></p> <div><b>100% HARDNESS TESTED</b> <i>30 pcs → 37/38 HRC</i></div> <p><i>[Signature]</i></p> <p>V.A.I.O. TH. 27 Q.C.</p>					

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC.

Authorized Q.C. Inspector



VACUUM BRAZING · HEAT TREATING · SPECIAL PROCESSING · FURNACE EQUIPMENT  
TURBINE COMPONENT OVERHAUL · PLASMA AND OTHER COATINGS

